

Hanford Site Chronic Beryllium Disease Prevention Program

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The Hanford Site Chronic Beryllium Disease Prevention Program (CBDPP) establishes a coordinated program for current and future Hanford site workers regarding protection from previous, current or future exposure or potential exposure to beryllium. As the site occupational medical contractor (SOMC) to DOE, AdvanceMed Hanford (AMH) provides medical surveillance as defined in the CBDPP and provides support to site contractors in meeting the requirements of 10 CFR 850, federal register for beryllium. AMH's medical director is the designated site occupational medical director (SOMD) and is responsible for administering the medical monitoring program as described in the Hanford site CBDPP.

The AMH beryllium case manager assists in coordinating contractor procedures as described in the individual contractor appendices with the medical monitoring program. AMH coordinates the self-identification

process to identify workers who may have been exposed to beryllium in the past.

AMH administers the beryllium monitoring programs using information provided by the contractor employer which includes:

- list of beryllium-assigned workers and their essential functions
- baseline inventory of beryllium-listed facilities
- hazard assessment and exposure monitoring data
- type of personal protective equipment used.

AMH Beryllium Monitoring Programs

AMH provides two beryllium medical monitoring programs and two beryllium-related services.

Beryllium-Assigned Worker Program (BERCU)

This program provides medical monitoring for workers (beryllium-assigned workers) who are assigned to beryllium projects. Participants are enrolled through the employee job task analysis (EJTA) process. The BERCU consists of a baseline examination followed by annual periodic examinations. The beryllium lymphocyte proliferation test (Be-LPT) is required for each examination.

Beryllium: Previous Exposure (BERPV)

This program provides medical monitoring for those who may have been occupationally exposed to beryllium at the Hanford Site or at any DOE or DOD site at some point in the past. Enrollment and related testing, including the Be-LPT, are voluntary. Participants are identified by their employers or

self-identified through the DOE historic health exposure questionnaire. The examinations consist of a baseline examination (EXBE) followed by periodic examinations.

Initial Exam for Workers with Previous Exposure to Beryllium (EXBE)

This service provides the baseline evaluation for workers identified as having had a potential previous exposure to beryllium at the Hanford Site through one or more of the following processes:

- completing the *Hanford Beryllium Worker Questionnaire*
- completing the *DOE Historic Health Exposure Questionnaire*
- contacting the beryllium case manager
- recommendation from their employer
- recommendation from an AMH physician or physician assistant.

Exposure to Beryllium (EXBER)

This service is applied in emergency situations where exposure to beryllium may have occurred. Based on the results of the examination, the physician or physician assistant places the worker in an appropriate beryllium monitoring program. The physician or physician assistant offers referral to Behavioral Health Services to these workers.

Medical Evaluations

AMH has established a Be case management team that meets on a regular basis to discuss difficult cases. When appropriate, an external Be-knowledgeable provider may be consulted. At no cost to the worker, the AMH licensed medical examiners perform beryllium evaluations based on medical protocols. Each of the medical monitoring programs contains several components, which are summarized below.

Medical History

The medical history includes questions regarding the general health of the individual. Specific emphasis is placed on the respiratory system.

Occupational History

The occupational history includes

- previous work history (e.g., contractor industrial hygiene monitoring results, projects, work practices, personal protective equipment)
- review of the employee's job-task analysis.

Initial (Baseline)

The initial examination establishes a baseline for the current health status of the worker that can be used as a basis for comparing results of future evaluations. The initial examination includes

- detailed medical and work history
- respiratory symptoms questionnaire
- physical examination with emphasis on the respiratory system
- chest x-ray (i.e., PA and lateral) interpreted by a certified B-reader
- spirometry
- Be-LPT
- other tests as deemed appropriate by the examining physician or physician assistant.

Periodic (Routine)

The periodic medical examination is provided to beryllium-assigned workers annually and to the workers with possible previous exposure to beryllium at least every three years. Periodic evaluations include

- detailed medical and work history
- respiratory symptoms questionnaire

- physical examination with emphasis on the respiratory system
- Be-LPT
- chest x-ray (PA and lateral) interpreted by a certified B-reader (3-year frequency)
- other tests deemed appropriate by the examining physician or physician assistant.

Referral and Multiple Physician Reviews

Review of Initial Medical Evaluation

AMH acts on behalf of the responsible employer as the provider of choice for performing initial beryllium medical evaluations and consultations. AMH facilitates the multiple physician review for beryllium-associated workers as listed in 10 CFR 850 and in accordance with the AMH contractual referral process.

AMH facilitates scheduling and payment for medical tests and evaluations for the purpose of diagnosing chronic beryllium disease in beryllium associated workers enrolled in an AMH beryllium medical monitoring program. If the worker chooses to make their own arrangements for subsequent medical opinions, AMH does not facilitate scheduling or payment for those services. In this case, AMH advises the worker to notify their employer of their intent to seek another opinion independent of AMH. AMH counsels the worker that the employer notification should be done within 15 days of receiving the most recent test results. AMH does not provide specific medical care or treatment of beryllium disease within the scope of the medical monitoring program.

The multiple physician review process is explained to the worker during initial and periodic evaluations. Written notification of the results of the initial evaluation, including notification to the worker of the right to seek a second medical opinion, is given to the worker within 10 work days of receiving all test results related to that evaluation. The worker may, at any time following the initial evaluation, request a second opinion. AMH assists the worker in identifying medically credible facilities or providers and in scheduling appointments.

In the event the initial evaluation and the second opinion are in disagreement, AMH actively engages the second provider in discussions in an attempt to reach agreement. If this approval is not successful, AMH works with the worker and their private medical provider to identify a third medically qualified provider to review all relevant medical information and conduct any medical evaluations necessary to arrive at a definitive diagnosis. AMH acts consistently with the findings, determinations, and recommendations of the third physician or attempts to reach an agreement with the worker that is consistent with the recommendations of at least one of the other two physicians. If the worker desires an alternate approach to the one described here, AMH counsels the individual to make the necessary arrangements as long as the process is timely and protective of the worker. In all cases, the consulting providers and evaluating facilities are to be the worker's choice so long as the provider and facility are medically credible and, for diagnostic purposes, related to beryllium disease.

Other Referrals (beryllium related medical issues)

After the definitive diagnosis is made, beryllium-affected workers may require additional medical evaluation and/or testing. AMH coordinates medical referrals as needed or requested by any worker enrolled in an AMH beryllium medical monitoring program. The process is consistent with already established medical referral processes used by AMH and the Hanford site contractors.

Reporting

Reporting to the Employer of the Beryllium-Assigned Worker

A medical examination report, which communicates that the worker has been evaluated, is provided to the responsible employer following the completion of each beryllium examination. The physician or

physician assistant provides a medical opinion letter to the responsible employer within 10 working days of receiving all beryllium-related test results for that particular examination. This letter communicates that medical recommendations have been made and test results explained to the worker and that the worker does or does not have any detected medical conditions that would put the worker at an increased health risk from work with beryllium. Medical recommendations and diagnoses related to occupational beryllium exposure are communicated to the employer through the work restriction notification process.

Reporting to the Employer of the Worker with Previous Beryllium Exposure

The notification process for work restrictions and job injuries or illnesses is used to inform the employer of the worker's status. The worker's status is conveyed through the following:

- a notification that all recommendations and test results have been communicated to the worker
- a notification of positive results.

Reporting to the Worker

The beryllium-assigned worker and the worker with previous exposure to beryllium receive written communication from the examining physician or physician assistant or the beryllium provider explaining beryllium-related test results, positive findings, and medical recommendations. The beryllium-assigned worker receives a copy of the medical opinion letter that is sent to the employer. All reports are provided to the worker within 10 working days of receiving all beryllium-related test results for that particular examination.

When a worker is determined to be a Be-affected worker, the Be case manager coordinates a meeting at AMH with the worker and the contractor industrial hygienist so that all three parties can review and determine where past exposures may have occurred and discuss future protective measures.

Medical Removal (Work Restrictions)

Medical removals are made when a worker has developed chronic beryllium disease or sensitization to beryllium. Medical removal protection is offered when the SOMD determines "in a written medical opinion that it is medically appropriate to remove the worker from such exposure. The SOMD's determination must be based on one or more positive Be-LPT results, chronic beryllium disease diagnosis, an examining physician's recommendation, or any other signs or symptoms that the SOMD deems medically sufficient to remove a worker." Recommendation for medical removal is conveyed through the work restrictions notification process. Since a restriction of "*no exposure to beryllium*" is perhaps impractical to apply to the Hanford site, the standard work restriction may alternatively read, "*no work where there is exposure to airborne beryllium at or above 0.01 µg/m³8-hour TWA.*" Work restrictions may be temporary, such as when waiting for test results, or permanent. They are reviewed periodically. The physician or physician assistant provides information to the worker regarding the risks of exposure to beryllium, and the worker signs a document in a designated place acknowledging that they have received the medical recommendations and counseling regarding the risks of beryllium exposure and the benefits of medical removal.

Medical Consent

A signed medical consent is obtained before performing medical evaluations or any tests. Before the consent is signed, AMH provides each worker scheduled for an initial beryllium examination with a summary of the medical monitoring program and information on program testing and examinations at least one week before the first medical evaluation or procedure or upon the worker's request. The summary includes:

- medical testing included in the monitoring program
- explanation and risks of tests and examinations

- type of data collected
- where the data are kept and how they are used
- how confidential data are protected.

Counseling

AMH provides counseling to workers who are diagnosed as being sensitized to beryllium or who have CBD. The counseling includes provisions of the medical monitoring program, information about follow-up medical diagnostic evaluation options, and the risk of continued beryllium exposure for sensitized workers and those with CBD. AMH provides psychological counseling to sensitized workers and workers with CBD through the Worker Assistance Program.

Recordkeeping

Medical information generated by the CBDPP is included as part of the worker's site confidential medical records and is maintained at AMH. Medical records and information provided by the employer are both maintained for the required 75 years. The records are used or disclosed in conformance with any applicable requirements imposed by the *Americans with Disabilities Act*, the *Privacy Act of 1974*, the *Freedom of Information Act*, and any other applicable law.

Records may be released for appropriate official purposes of DOE, National Institute of Occupational Safety and Health (NIOSH), Occupational Safety and Health Administration (OSHA), state health department, or Congress. Medical information without personal identifiers such as name, social security number, address, or phone number or other information that could be used to identify particular workers is provided to certain individuals such as DOE officials responsible for CBDPP, scientists and researchers working under DOE agreements, and the Oakridge Institute Science and Education (ORISE).

AMH works cooperatively with site contractors to analyze medical, job, and exposure data in order to identify workers or groups of workers potentially at risk for beryllium sensitization or CBD and working conditions that may contribute to that risk. AMH maintains a database of beryllium-associated workers including workers with previous exposure to beryllium (self-identified or identified by employer) and current beryllium-assigned workers (identified through the employee job task analysis). AMH also maintains the Hanford Beryllium Registry and transmits information semi-annually to the DOE Office of Epidemiological Studies within the Office of Environment, Safety and Health to be included in the national beryllium registry. All personal identifiers are removed from any transmitted information.

Performance Feedback

AMH conducts quality assurance assessments on an ongoing basis. Periodic customer evaluations and evaluations conducted outside the facility provide feedback to AMH management and other involved persons.